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## RUBENS AND HIS WORKS. I.



RUBENS.

PETER PAUL RUBENS, who may be considered as the prince of Flemish painters, was not only an illustrious artist, but a man of much learning, sagacity, and knowledge of the world. He was born at Cologne, 29th June, 1577, to which place his parents had retired to avoid the calamities of civil war then raging around their former dwelling-place, the town of Antwerp, where his father of Rubens had held the respectable offices of jurist and magistrate. Much care was bestowed on the early education of Rubens, and the progress he made amply responded to the assiduity of his instructors. He showed an early taste for literature, and made rapid progress in the Latin language.

The Duke of Parma having restored the town of Antwerp to the dominion of Spain, the family of Rubens returned to their country: and our artist, being then a fine youth of sixteen, was placed in the establishment of the Countess de Laling as page. Here the licentious manners of his companions so disgusted the upright mind of the young man, that he repeatedly solicited permission to resign his post, and return home. At length he obtained his mother's consent (his father being now dead) to

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devote himself henceforth to the study of painting. He was first placed with Tobias Verhaegt, a clever landscape painter, and afterwards with Adam von Oort. The character of this man was so debased that Rubens left him, and entered the service of Othovenius, court painter to the Infanta Isabella and the Archduke Albert, and at that time considered as the Flemish Raphael. The pupil applied himself not only to copy the beautiful touch of this master, which he soon equalled, but he also took him for his model as to politeness of manner, general conduct, and application to study.

When he had attained the age of twenty-three, he thought it was time to visit Italy and complete his education as an artist, and as his former situation had introduced him to the knowledge of some of the nobility, he found no difficulty in making his way. According to some writers, Albert, duke of Austria, sent him to Vincent de Gonzaga, duke of Mantua, who received him favourably and gave him a situation in his household, where he remained seven years, more occupied in studying his art than in following the frivolous amusements of those with whom he lived. Here he had an opportunity of studying the

frescoes of Giulio Romano, and the other works of art then belonging to the Gonzaga family. It is said that being one day deeply engaged with a classic subject, he was endeavouring to kindle his genius by repeating aloud the lines from Virgil which bore relation to it. The duke, who had entered the apartment unperceived, smiled at the vociferations of the artist, and thinking to embarrass him, addressed him in the Latin language. His surprise was great when Rubens answered him in terms worthy of the age of Cicero. He now interrogated the artist, and learned the particulars of his birth and education, and those, together with the amiable qualities and the rare talent he had observed in the young man, raised him highly in his estimation.

Towards the end of the year 1601 Rubens paid a hasty visit to Rome, and afterwards to Venice, where he closely studied the works of Titian and Paul Veronese, who, of all other masters, seem most to have assisted him in his taste for colouring. Three pictures, executed for the church of the Jesuits in Mantua, bear traces of the style he was then studying. The duke of Mantua, having long wished to possess copies of some of the most valuable pictures in Rome, now employed Rubens on the task, and at the same period the artist found time to execute three paintings for the Archduke Albert, the subjects of which were the Crowning with Thorns, the Crucifixion, and the Finding of the Cross, remarkable specimens of his style of painting at that period.

It was probably on his return from Rome that Rubens visited Florence, where he received a distinguished welcome from Grand Duke Ferdinand I. The description of Rubens' personal and mental endowments at this period seem to prove that he was more than ordinarily gifted, and calculated to please:—

"To a handsome and well-proportioned frame was united a certain dignity of demeanour. His regular features were set off to advantage by a fine complexion, and glossy brown hair; and his eyes, beaming with a softened fire, gave to his whole countenance a character at once gentle, animated, and noble. To these advantages were added a most captivating manner, and an agreeable voice, an active clear intellect, with a turn for humour, and an habitual self-command." These advantages caused the duke of Mantua to name our artist as a fit person to be the bearer of a commission to Philip III., king of Spain.

In this honourable character Rubens set out, laden with rich presents for the Spanish court, and by his tact and the gracefulness of his manners, he soon made himself a favourite with the king and the whole court. He painted a great number of portraits and of historical pictures during his stay, and these brought him immense sums of money. His name made so much noise that John, duke of Braganza (afterwards king of Portugal), protector of the arts and sciences, wrote to a nobleman at Madrid, to prevail on the painter to go to Villaviciosa, where the duke resided. Rubens accepted the honour, and set out with such a train of attendants, that the duke, alarmed at the expense which such a guest would occasion, despatched a messenger to the artist, when he was only a day's journey from the court to beg him to defer his visit to another time. This message was accompanied with a purse containing fifty pistoles, to repay Rubens for the expense he had already been at, and for the time he had lost. Rubens replied that he could not receive this present as he had taken the journey, not as an artist, but for the purpose of eight or ten days' recreation at Villaviciosa, and that he had brought with him a thousand pistoles to spend during his stay. Such a rapidly acquired fortune, shows at once the high success which he had met with in Spain.

On the return of Rubens to the court of the duke of Mantua, he obtained leave again to visit Rome, where he had been commissioned to paint an altar-piece for the church of Santa Maria Vallicella. His

next visit was to Genoa, where historical pictures and portraits occupied his attention. The principal persons of the city engaged him to lay down the plan of some fine edifices, and he also drew the elevations, which were engraved, and formed a large volume. At this time when he was in the height of his fame, and when every day brought fresh proofs of the esteem in which he was held, he suddenly left all his honours and his employments on the news of his mother's dangerous illness. With his utmost diligence, however, he was not able to reach Antwerp in time to see her before her death, and this circumstance, together with his acute feelings on her loss, threw him into a state of the deepest affliction. For a long time he shut himself up from the society of his friends; and it was only by degrees that he began to find pleasure in his former employments.

At length he began to make arrangements for his departure to Mantua, when the Archduke Albert, being informed of his intention, expressed to him the regret he felt on the occasion. He assured him that he could not suffer, without interference, the departure, and the loss to Flanders of its most distinguished ornament. These marks of kindness and distinction made Rubens hesitate, and becoming at that period attached to his future wife, Elizabeth Brants, he finally gave up his intention of quitting the country.

Soon after his marriage, which took place in 1609, Rubens built a house, which from the descriptions given of it should rather be called a palace. His study was built in the form of a rotunda, and lighted from above; in it were placed vases of porphyry and agate of great value, the finest busts both of ancient and modern workmanship, with choice collections of medals and paintings. The collection altogether was considered as that of a prince, rather than of a private individual. The Duke of Buckingham saw this collection, and earnestly desired to get possession of it. At length he prevailed on the artist to allow him to purchase a part of it. But though he sent sixty thousand florins as the purchase-money, Rubens parted with his treasures with the greatest reluctance, and only at the repeated solicitations of the English nobleman. It was somewhere about this time that Rubens painted the beautiful picture in the Munich Gallery representing himself and his wife seated in a garden.

Dr. Waagen says of this picture, "The air of sober affection in the couple, who are seated in an arbour of honeysuckles, the expression of calm intellect and energy in the head of Rubens, and of cheerful good-humoured contentment in that of his wife, lend a peculiar attraction to this picture, and speak direct to the heart: in this respect it differs as much from the peculiar style of his latter works as it does in the more strongly marked outlines, the less glowing colouring, and the careful execution of the well-adjusted and elegant attire of the figures, as well as of the foliage and herbage in the foreground."

Rubens now began tranquilly to enjoy his fortune and his reputation. Though he continued to paint, he appeared to do so chiefly to gratify his taste, and out of complaisance for the curious, who showed the most eager desire to obtain some of his works. His wealth was very considerable, and at length became immense. He imagined and executed his pictures with great ease, and was able to continue long at his easel without any detriment to his health. But for the sake of finding time for the different sorts of study which his mind led him to, he adopted a strict division of his hours, and a regularity in the order of his studies which nothing was permitted to change. And he knew how to admit together occupations which were not opposed to each other. He never painted without having some extract from sacred or profane history, or poetry read to him, and his acquaintance with languages (of which he spoke



seven) made the authors of other nations familiar to him. This amount of knowledge had enriched the genius of the painter, and ornamented with many agreeable and entertaining qualities the man of the world. Rubens was never idle, for his hours of recreation were those which he devoted to the belles lettres.

The number of his pictures was no less remarkable than their beauty. The "Four Evangelists" and the famous "Descent from the Cross" were the pride of Antwerp. Every town in the Low Countries disputed for the honour of possessing one of his masterpieces, and the cities of Italy showed equal emulation. Genoa, Bologna, and Milan obtained only as it were by favour a small number of his pictures, and these were placed among the wonders of Italy. At last, overcome by the number of demands that were made on him, Rubens adopted the expedient of employing his most advanced pupils. He made them work out his designs, and only retouched them himself, but that so exquisitely that it requires much connoisseurship to detect them from those which were solely his own. Wildens and Van Uden painted landscape; Sneyders fruits, flowers, and animals; Rubens presided, and knew how to blend together the different manners with such nicety of art that it seemed as if but a single hand had been employed on the work.

In the celebrated "Descent from the Cross" the boldness of the composition, the energy in the characters, the striking attitudes and grouping, the glowing, vigorous colouring, are astonishing proofs of the painter's power; and it may be interesting to our readers to be made acquainted with the circumstances which gave rise to this wondrous effort of art. It is said that Rubens, in laying the foundations of his villa near Antwerp, had unknowingly trespassed on some ground belonging to the Company of Arquebussiers. A law-suit was threatened, and Rubens prepared to defend it, but being assured by one of the greatest lawyers of the city that the right lay with his opponents, he immediately drew back, and offered to paint a picture by way of recompense. The offer was accepted, and the company required a representation of their patron saint (St. Christopher), to be placed in a chapel in the cathedral. Rubens, with his usual liberality and magnificence, presented to his adversaries, not merely a single representation of the saint, but an elaborate illustration of his name (*the Christ-bearing*). The Arquebussiers were at first disappointed not to have their saint represented in the usual manner, and Rubens was obliged to enter into an explanation of his work. Thus without knowing it they had received, in exchange for a few feet of land, a treasure which neither money nor lands can now purchase.

This work raised his fame to the highest pitch, so that when Mary of Medicis wished to adorn the palace of the Luxembourg with a series of pictures representing the principal events of her life, Rubens was sent for as the most accomplished painter of the time. The artist went to Paris in 1620, and received a commission for twenty-one compositions, which by the help of his numerous pupils he completed in 1625. The portraits were by his own hand, and are amongst the most valuable of his works, but in the composition of the historical scenes, and in the manner which he has treated the allegorical and historical personages, he is justly reproached with that depravation of taste so disagreeably apparent in the works of many of the Flemish painters of the sixteenth century. "Who that is endued with a fine and high feeling for art, can derive pleasure from contemplating a whole bevy of Olympian divinities, with their appendages represented according to the notions of the ancients, consequently half-naked, sometimes as swimming the ocean, or hovering in the air, and these brought into immediate juxtaposition with kings and queens and other personages of high rank, for the most part faithful portraits, and all in the formal costume of

those times? The marriage-scene, in which a bishop is represented as performing the ceremony before an altar, in the presence of Christ, whilst the heathen god Hymen is bearing the train of the princess, has long struck even the most unqualified admirers of Rubens as unseemly." However, the queen and the court were highly pleased with the work, and it added much to the fame of the artist. Commissions poured in upon him in great numbers, and but for the assistance of others he could not have executed the half of what was required of him.

It was the design of Queen Mary to decorate another gallery in the Luxembourg with a series of paintings from the hand of Rubens, taken from the history of Henri Quatre; and Rubens did, in fact, paint the victory of Henry at Ivry, and his subsequent triumph; but the numerous demands on his time, and the troubles of the court, interrupted him in his undertaking, to the loss of the art and its admirers.

## SKETCHES OF IRISH MANNERS AND CUSTOMS.

### VII.

I HAVE had another opportunity of seeing a wake, and of a higher order of the people, as was proved by the physician from a neighbouring town being called in, though his fee is always three guineas. The father is a farmer, and the deceased son had realized a considerable sum by trading in America. The house is of one story, and rather long; very firmly built of very large stones, quite rough: a few trees shelter it, and it would be pretty for this country of the ugliest race of houses imaginable, were it not so jammed in by byre and pigsty that it looks quite choked; also that it is without a morsel of the little garden which would beautify a similar dwelling in England; the taste for flowers and vegetables is yet dormant.

I arrived at the farm about nine o'clock in the evening, and was shown into a low dark room, without ceiling,—open to the rafters, and under thatch. A turf fire was burning, and benches were ranged round the room in compact order: men, women, and boys occupied them, and I recognised the small farmers of the vicinity and their servants. My appearance was quite unexpected. The brother of the deceased, on perceiving me, came forward, and requested with simple courtesy that I would follow him, clearing a passage by saying, "Will yez make way for his honour?" As soon as my eyes became accustomed to the opaque atmosphere, I found myself in an inner apartment, of similar dimensions to the outer, and also without ceiling; but everything in it wore an air of greater cleanliness, and, if such a term may be applied, of greater comfort. Opposite the door blazed a cheerful turf fire: on the left, occupying the whole breadth of the room, were two beds touching each other. The curtains of the furthest were snowy white, as was the lining and coverlid; and in the centre rose the dim outline of a figure. I felt I looked upon the corpse. The other bed was neatly curtained with a blue and white checked stuff; and on that bed lay the bedridden mother of the deceased. There were two or three rows of raised benches, and others ranged on the floor in the greatest order, and in every available position, to afford the utmost accommodation to the guests, who amounted to about seventy, of divers ages. Even on the side of the mother's sick-bed persons closely sat; but my greatest surprise was to see three women sitting on the side of the bed on which lay stretched the corpse. A young matron sat in the middle; on her left, a very handsome dark-haired girl of eighteen or nineteen; and on her lap, with her arms around her, sat the loveliest young creature, of about

sixteen, that ever I beheld, and with an expression of gentleness and sweetness as engaging as her marvellous beauty. These three composed part of the singers of a distant chapel, two bands having assembled to do especial honour to the occasion: and there they sat, almost in contact with death, chattering in subdued tones, but with much animation of manner, upon the persons and the scene before them.

In the centre of the room were placed a few chairs for those of the highest rank: to one of these I was conducted by the brother. I said I regretted poor Neil had not been able to overcome his illness: he replied that "it could not be helped," and immediately began a conversation upon the merits of a horse he heard my honour wanted to purchase. There was a table near the corpse bed, upon which was a very white cloth, two plates—in each of which stood a candle—and between them another plate, with tobacco and six or eight pipes: no one was smoking. Presently there was a little stir in the room, and a singular-looking man advanced to the table: the lower part of his face was of most preposterous length; his forehead extremely low; his hair plastered flat, with an occasional rebellious hair darting out at right angles; his eyes squeezed up, with a queer kind of knowingness and conceit, and a thin pinched nose: he was the precentor of one of the bands, and at his bidding the pretty trio ranged themselves round the table. Other persons advanced, leaving the bedridden woman free to breathe, and give some signs of having survived the suffocating pressure she had been enduring.

About five women and four men were arranged, and the precentor, with a most self-satisfied manner, and the air of one who would not be gainsayed, intimated that a hymn was to be sung: he then gave various injunctions to his band, accompanied with strange waggings and noddings of his head, and when he considered them duly prepared he repeated a few words of the hymn and led off the strain, followed by the rest in full cry: it was an excess of discord that I may fairly hope never to endure again. The only relief was the extreme absurdity of the precentor, his natural oddity giving greater effect to his ridiculous self-importance. Several hymns were thus performed, the company meanwhile maintaining a solemn silence, broken only by an occasional sigh or sob from one of the near relations of the deceased.

During one of the pauses between the hymns the aged father-entered—a very fine old man, nearly eighty-four: he was very pale, and had suffered much from his son's death. Way was made for him through the room, which by this time was perfectly stifling: he came up to me and offered his hand, and thanked me for coming. I made some remark upon his loss, which he said had been a hard blow to him: he had not slept since. He was advised to lie down, but he said he was worse then: he declined a chair, and retired to one of the forms.

The night was by this time far advanced, and I rose to go. The son who had received me attended me out, and when we reached the outer apartment he begged me to come into another room: there I found his wife, who advanced to meet me, frankly offering her hand. She was alone, busily engaged in her domestic affairs: it was a strange contrast to the scene in the adjoining room. Pat desired her to bring the whiskey-bottle and some bread and butter for his honour, and I saw I was expected to take some. Bread and oat-cake were placed before me in a basket: a wine-glass, a tea-cup, and an earthenware tumbler were set before me, and Pat called for some cold water, as his honour might not like the whiskey alone. I took a little, and that was the only drinking I saw that night: I then departed, again being thanked for my visit, which was considered a great compliment. The singing and company continued till daylight I heard.

The next day was the funeral, which I resolved to attend: of course, I did not join the procession, which

was very large, and would have been still more numerous had not the weather been so violent that the women were generally obliged to remain at home. The two priests attended, many cars, many horsemen, and a multitude on foot: some order was observed, till a most furious storm scattered them hither and thither for shelter. The chapel was two miles and a half from the farm-house, and when I arrived was half filled; and soon after I had obtained a seat in the gallery, the crowd became immense. Mass was read, with the usual dressings and undressings and gabblings: of course, the service, vestments, &c., were not very splendid. A sermon was then preached, entirely to inculcate the system of offerings, on the ground of being a gospel command, (for which St. Paul was quoted,) and begun under the Law, (for which he referred to Judas Maccabeus,) and inferred that, as such practice continued amongst the Jews, and was *not* condemned by our Saviour, it was in fact sanctioned by him. Jeremy Taylor and Bishop Forbes were made to corroborate these assertions. There was a good deal of praise of the character of the deceased in all his relative situations, and of his kindness to the poor, which all who had known him confirmed. And there was a strong exhortation to charity towards such as differed with them in religion; and as we were the only Protestants present, and our appearance was quite unexpected, it cannot be supposed that there was any insincerity in the exhortation to brotherly kindness.

When the discourse was concluded the priest said that "if any persons wished to make offerings, the relations of the deceased had better come forward and assist:" accordingly two kinsmen went up to the altar, and a most extraordinary scene began: they called out the names of a number of people, who they were authorised to say would give offerings: then from all parts of the chapel voices cried, "I'll give one." If they were prominently in view of the altar they named themselves, as "Jemmy O'Neil, of Fallaballa," "James O'Neil, of Baliska," "James O'Neil, his wife and baye." Well, then were shouted out the names of some thirty other O'Neils, the priest generally repeating the name if he caught their eye, or else the kinsman, or the curate, which was intended as a complimentary notification that they had behaved decently. Then a Pat Mac Aulay would begin, and a score of Mac Aulays would bawl after them: then there would be a pause, as if the zeal was growing cold. Then the priest would inquire if any others wished to show their good will, which seemed as the bellows to their feelings; and then the Blaneys, and the Mac Neils, and the Campbells, &c., &c., in tens and twenties, would shout out—then another pause—then a dropping fire as it were—and in this way, till all that chose had called their names out. The chapel was crowded to suffocation, and the contributors were very numerous, though some on departing *forgot* to deposit their offering on the plates. One was on the altar, the other on the altar steps. The priest announced the amount, and assured them it was by far the most respectable offering he had seen for a long time. It is the perquisite of the priest, and the custom is entirely disapproved by many Roman Catholics. A gentleman on this occasion expressed to us a strong feeling against it, and said he gave the smallest sum he could, and merely to avoid being marked as showing disrespect to the deceased, who had been in some way of his kith and kin. Our going was acknowledged some days after by the old father as a very gratifying compliment.

This ceremony over, the congregation dispersed, and the priests departed. The corpse remained in the chapel, and some time in the day would be committed to the earth by the kinsmen, unless the severe weather put it off to the next day. There is something very revolting in this abandonment of the poor remains, and the whole is in such contrast to our touching burial-service that it makes one feel new gratitude for the faith in which one



was born, and lives, and trusts to die. There is a very extraordinary indifference to the remains of their friends, and to what our peasantry would consider decency towards a corpse. One day we saw a car going along, with several women in it, laughing and talking as gaily as possible: something was in the bottom of the car—I could not make out what,—and we were not a little surprised at the car stopping at the door of a chapel: out jumped the women, and a coffin was taken out after them: they had been sitting or leaning upon it, uttering their jokes with as much unconcern as if it had been a log of wood.

**"THE UNSPEAKABLE BLESSEDNESS OF A GODLY HOME."**

HERE is the cradle of the Christian: hence he sallies forth, armed at all points, disciplined in all the means of resistance, and full of hope of victory, under his heavenly Leader. Hither he ever afterwards turns a dutiful and affectionate look, regarding it as the type and pledge of another home; and hither, when sore wounded in that conflict, he resorts to repair his drooping vigour; and here, when abandoned by the selfish sons of the world, he finds, as in a sanctuary, the children of God, ready with open arms to receive him: and here, the returning prodigal, enfolded in the embrace of those, who know not, dream not, of the impurities of the world with which he has been mixing, feels, all at once, his heart burst with shame and repentance. Merciful God! what a city of refuge hast thou ordained in the Christian home!—*The Rectory of Valehead.*

If a man's wit be wandering, let him study the mathematics: for, in demonstration, if a man's wit be carried away never so little, he must begin again.—**LORD BACON.**

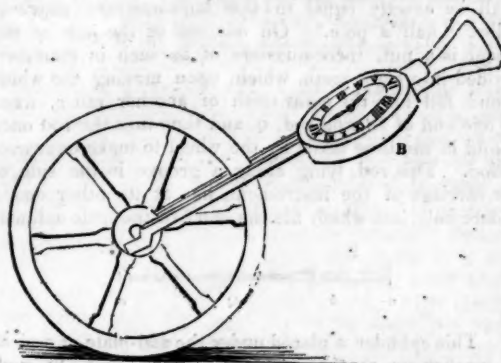
SEEK not proud riches: but such as thou mayest get justly, use soberly, distribute cheerfully, and leave contentedly.—**LORD BACON.**

I HAVE still chosen rather to forbear what might be *probably lawful*, than to do that which might be *possibly unlawful*: because, I could not err in the former; I might in the latter. If things were disputable, whether they might be done, I rather chose to forbear; because the lawfulness of my forbearance was unquestionable.—**SIR MATTHEW HALE.**

THEY who preach to us that the pursuit of virtue is rugged and painful, but the fruition pleasant, what do they mean, but that it is always disagreeable? For what human means ever arrived to the attainment of it? The most perfect have been forced to content themselves with aspiring to it, and to approach without ever possessing it. Of all the pleasures which we know, the very pursuit of them is pleasant. The attempt savours of the quality of the thing which it has in view. The felicity and rectitude which shine in virtue, fill up all its apartments and avenues from its first entrance to its utmost limits.—**MONTAIGNE.**

I AGREE with Mrs. Chapone, that coldness in religion is a far more dangerous extreme than over much heat. The one may consist with real goodness; nay, may be the consequence of real goodness, commixing with a perturbed imagination, or an ill-formed judgment. But coldness can be resolved only into an absolute want of feeling. Enthusiasm is excess, but coldness is want of vitality. The enthusiast, in a moral view, is insane; which implies the possibility of recovery, and perhaps, a partial or occasional recurrence of reason. The cold person is like the idiot, in whom reason never shows itself, and where convalescence is desperate. But, let it ever be remembered, that he who has really found the mean between the two extremes, will, and must, be reckoned enthusiastic, by those who are in the extreme of coldness. You can easily conceive that when any one stands on a middle point, between two others who are, with respect to him, strictly equidistant, he must, from the inevitable laws of perspective, appear to both, to be, not in the middle, but comparatively near the opposite party. He therefore must make up his mind to be censured on both sides; by the enthusiast, as cold; by those who are cold, as an enthusiast.—**ALEXANDER KNOX.**

**ROAD MEASURERS.**



IT is somewhat unfortunate that, in assigning names to scientific phenomena, instruments, and processes, the customary terms chosen are such as do not appeal to the million. The men of science throughout Europe are supposed to be acquainted with the Latin and Greek languages, and hence originated the custom of compounding new terms from those languages. The words *odometer* and *pedometer*, unfamiliar as they may sound, mean nothing more than "road measurer" and "pace measurer."

There appears to have been, ages ago, a wish to devise some mode of determining the distance which a traveller had passed over, whether on foot, on horseback, or in a vehicle. The use of a machine, working by wheels, and moving with the traveller, is that particular form of contrivance to which we here allude. Vitruvius describes a machine which, if affixed either to a vehicle or to a ship, would, according to his opinion, indicate the distance which had been traversed. On the front of the palace of the Duke of Urbino, built in 1482, were some very elaborate carved devices, among which is an odometer; thus indicating the use of some such instrument at that period. John Fernel, physician to Catherine de Medici, used an odometer for determining the length of a degree of the meridian, in the year 1550: the only account we have of its construction is that it contained wheel-work, and that "the revolutions of the wheels were shown by a hammer striking on a bell." In 1598, Paul Pünzing, a mechanic at Nuremberg, published a "Treatise on Measuring Land, and how to use proper instruments for that purpose, on foot, on horseback, or in a carriage." He describes a sort of odometer which was existing so late as the end of the last century, in a museum of curiosities at Dresden. In this museum was also preserved an odometer which was employed as a means for measuring roads, under the orders of the Elector of Saxony nearly three centuries ago. The Emperor Rodolph the Second, who reigned about the end of the sixteenth century, and who had a taste for the mechanical arts, possessed two very curious odometers, which not only measured distances, but registered the results on paper.

An Englishman named Butterfield, a Saxon artist named Adam Frederick Zürner, the mechanic Sauveur, the French artists Meynier and Outhier, together with other persons, all constructed odometers during the last and the preceding centuries; but very little is now known of them.

In our own country, instruments have from time to time been made, which, under the various names of *odometer*, *pedometer*, *way wiser*, *perambulator*, and *road measurer*, have been used for the purpose of measuring distances. Many of these were, at the time of their introduction, made the subject of a patent, but were little heard of afterwards. The cut at the head of this article represents a form of perambulator which has been much used on our public roads. It consists of a

wheel, two feet seven inches and a half in diameter, so adapted that the circumference (eight feet three inches,) shall be exactly equal to that land-measure which is called "half a pole." On one end of the axis of the wheel is a nut, three-quarters of an inch in diameter, divided into eight teeth, which, upon moving the wheel round, fall into the eight teeth of another nut *c*, fixed on one end of an iron rod, *q*, and thus turn the rod once round in the time taken by the wheel to make one revolution. This rod, lying along a groove in the side of the carriage of the instrument, has at its other end a square hole, into which fits the end *b* of the little cylinder



*p*. This cylinder is placed under the dial-plate of a piece of mechanism at the end of the carriage *b*, in such a manner as to be moveable about its axis. Its end *a* is cut into a perpetual screw, which works into the thirty-two teeth of a wheel arranged at right angles to it; so that when the instrument is driven forward, this index-wheel makes one revolution to sixteen "poles" of distance traversed. On the axis of this wheel is a pinion with six teeth, which, working in another wheel of sixty teeth, carries the latter round once in a distance of a hundred and sixty "poles," or half a mile. This last wheel carries round with it a hand or index over the surface of a dial-plate, whose outer rim is divided into one hundred and sixty parts, corresponding to the one-hundred and sixty poles. Again, on the axis of the wheel last mentioned is a pinion of twenty teeth, which, working into another wheel of forty teeth, drives it round once in a mile. On the axis of this mile-wheel is a pinion of six teeth, which, working into a wheel of seventy-two teeth, causes the latter to rotate once in twelve miles. This last wheel carries an index-hand, which moves over the surface of the same dial-plate as that before spoken of; but its indications are measured by an inner graduated circle, which is divided into twelve equal parts for miles, and each of these subdivided for halves, quarters, and furlongs.

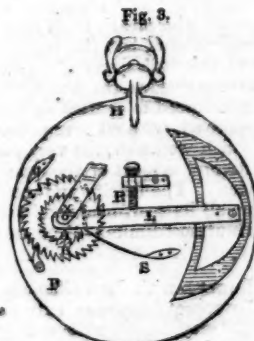
It will be evident that the indications on the dial-plate might be varied at pleasure, according to the number of teeth and pinions in the mechanism, so as to suit the standard of land measure adopted in any particular country. When this instrument is well made, it is capable of giving tolerably exact indications. Major Rennell says, that during the survey of India, he measured a meridian line of three degrees with this instrument, and found it to agree very closely indeed with the measurement given by astronomical means.

The instruments which have obtained the name of *pedometers* are generally much smaller than the piece of apparatus just described, since they are intended to be worn on the person of a pedestrian, for measuring the distance which he has walked. From the nature of this kind of muscular exercise, it is obvious that the determination of the distance walked is resolvable into the number of steps or successive movements made by the legs, multiplied into the space passed over at each step. The body rises and sinks at every step, and this alteration, provided the steps are equal in length, may be measured by an instrument called "Payne's Pedometer," invented a few years ago, and adapted to be worn in the waistcoat pocket of the pedestrian. Figs 2 and 3 represent a front and back view of the working parts of the mechanism, the cases being removed to show the interior.

The main part of the instrument is a lever *L*, so adjusted as to vibrate upwards and downwards at every step that is taken. This lever is furnished with a weight at one end, and a pivot *x* at the other. Under the lever is a spring *s*, which keeps the lever when at rest close up to a regulating screw *r*, the screw and the spring

being so adjusted as to be only just sufficiently strong to overcome the weight of the lever, and to prevent its falling downwards. When the instrument is hanging in the waistcoat pocket of the pedestrian, in the position seen in the figure, every tread of the foot on the ground, preparatory to a step being made, gives a slight jerk which causes the lever to sink a little, and for a momentary period, the spring driving it up into its place again immediately afterwards. The lever thus oscillates at every step, and these oscillations are made to act on an index-hand, in the following manner. Fitted to the axis *x* of the lever, and moving with it, is a small ratchet-wheel *A*; beneath this is another and larger ratchet-wheel *B*, which fits on the same axis, but is not attached to it. These two wheels are connected together by a ratchet, in such a manner that, when the lever falls, both wheels are moved forward one or more teeth; but when the lever rises again by the force of the spring *s*, the larger ratchet-wheel *B* is held fast by the ratchet *r*. This wheel *B* is connected with the series of toothed-wheels and pinions *c*, *d*, *e*, *f*, *g*, *h*, *i*, *j*, *k*, *l*, *m*, *n*, *o*, *p*, *q*, *r*, *s*, *t*, *u*, *v*, *w*, *x*, *y*, *z*, by means of a pinion *p*, fixed in its under surface. The centre-wheel *p* carries an index-hand, which points to the figures upon the dial-plate, to denote the number of miles passed over. The pedometer is generally made so as to register ten miles; but by regulating the proportions of the wheels and pinions, this matter can be adjusted to any standard. By placing an extra pinion and wheel in the same manner as for the second-hand of a watch, and making the wheel with ten times the number of teeth contained in the pinion, a system will be obtained, by which the pedometer will mark one hundred miles instead of ten.

This mechanism of the pedometer may be combined with that of a watch, the index moving over the dial-plate, divided so as to indicate time and distance; and thus every pedestrian, possessing such a compound arrangement, will not only be able to measure his ambulatory powers, but also to ascertain the amount of each day's walking, inasmuch as this instrument registers short as well as long walks. In the use of the pedometer, it is desirable to hang it in the pocket by means of the hook at *h*, in order that the lever be kept horizontal.



SIXTY trifles make the sum of human things,  
And half our misery from our foibles springs;  
Since life's best joys consist in peace and ease,  
And few can love or serve, but all may please,  
Oh! let the ungentle spirit learn from hence,  
A small unkindness is a great offence.  
Large hauntings to bestow we wish in vain,  
But all may shun the guilt of giving pain.

Mrs. H. MORE.

For my part, I should think a man who spent his time in a painful, impartial search after truth, a better friend to mankind than the greatest statesman or hero; the advantage of whose labours is confined to a little part of the world, and a short space of time; whereas, a ray of truth may enlighten the whole world, and live to after ages.—  
BISHOP BERKELEY.



## RURAL ECONOMY FOR THE MONTHS.

## V.

May is the very month of mirth!  
 And if there be a time on earth  
 When things below in part may vie  
 For beauty with the things on high,  
 As some have thought earth's beauties given  
 For counterparts of those in heaven;  
 'Tis in that balmy vernal time  
 When Nature revels in her prime,  
 And all is fresh and fair and gay,  
 Resplendent with the smiles of May.—MAY'S MONTHS.

If May is the month of mirth, so is it the month of activity and rural labour. It is at this season that the work of the dairy comes into full operation, giving employment of the healthiest kind, unremitting in its nature, and most valuable in its results. The noted cheese-localities of England, and the general management of the most celebrated dairies, would be too wide a subject for our sketch of rural economy, but may afford us interesting materials for separate and particular notices ere long. Yet we cannot pass over so important a feature in this month's operations, without calling the attention of our readers to some of the poetical associations connected with this pleasing toil, and which largely tend to give their peculiar charm to the scenes of May. Few can be insensible to the feeling of peace and quiet which the sight of herds calmly grazing in the rich meadows is calculated to produce: few that avail themselves of the benefits of early rising, but have watched with interest the steps of the cow-boy as he goes whistling among the dewy grass, and

With well-known halloo calls his lazy cows:  
 Down the rich pasture heedlessly they graze,  
 Or hear the summons with an idle gaze;  
 For well they know the cow-yard yields no more  
 Its tempting fragrance, nor its wintry store.  
 Reluctance marks their steps sedate and slow;  
 The right of conquest all the law they know;  
 The strong press on, the weak by turns succeed,  
 And one superior always takes the lead;  
 Is ever foremost whoso'er they stray,  
 Allowed precedence, undisputed sway:  
 With jealous pride her station is maintained,  
 For many a broil that post of honour gained.

But to revert to the field-work going on in May. Attention is now demanded by the field crops in general, and the hoeing of wheat, beans, peas, &c., forms a principal employment. If wheat is sown broadcast it cannot of course be so effectually cleared from weeds, as when the drill is used, since the process is then confined to such weeds as can be removed by hand. But wherever wheat is drilled, the business of hoeing can be effectually executed: if this is thoroughly done, it is found not less beneficial to the crop by stirring the soil and closing it round the roots than by eradicating the intrusive vegetation by which it would soon be encumbered. Common hand-hoes are either made entire, or with a perforated blade, the latter being preferable for thinning crops or destroying weeds, but the former, or common square blade, for earthing up. Horse-hoes are also in great request, and of these the variety is so great that almost every implement-maker has his favourite form. A good use of the hoe, by loosening the earth, and gathering it round the plants, has been found greatly to promote tillering, or the production of new stalks.

Turnip-sowing commences in this month, though the main crop is not put in till June. Turnips succeed best on soils that are loose of texture, and when managed according to the most approved courses of cropping, they enter into rotation every fourth or sixth year. The land should be well cleaned and pulverized—the manure also should be carefully prepared, and in a state of minute division—otherwise the work will be imperfectly done, and much of the labour lost. The three species of turnips usually cultivated are the *White Globe*, which

ripens early, and gives a full crop; the *yellow*, which has the advantage of being more hardy, and is usually intended to follow the other; and the Swedish turnip, or *Ruta baga*. The time of sowing varies with the different varieties, the Swedish and the yellow being put in before the white.

The valuable nature of the turnip crop makes it the more to be regretted that several enemies to its growth and perfection are manifested in different stages of its progress. The greatest obstacle in the way of the turnip grower is the insect *Chrysomela sultatoria*, or turnip-fly. The disease called the canker is produced by another insect, *Tenthredo oleracea*, especially dreaded in the county of Norfolk, where in the course of a day or two, on the prevalence of a north-east wind, whole fields are not unfrequently covered with it. After turnips have made some progress, the black caterpillar commences its work of depredation, nor are the operations of the gray caterpillar, in certain situations, less formidable than any of the others.

The means that have been adopted at different times for the prevention of this evil are almost too numerous to mention; but we are not justified in attributing to any of them complete, or even very considerable success. Some agriculturists have endeavoured to save their crops from ruin by steeping the seed in train-oil, linseed-oil, or some similar fluid for twenty-four hours, then mixing it with finely-sifted earth, and immediately depositing it in the drill. Others have sown their land with quicklime, vegetable-ashes, soot, or barley-chaff, or sprinkled it with lime-water, tobacco-water, &c. The practice of rolling the ground with a heavy roller during the night, when the insects come forth, has been also adopted. It has been suggested that, as the radish leaf is preferred by the slug to that of the turnip, a little of the latter should be sown along with the turnips, and as the radishes make their appearance first, there would be a chance of escape for the main crop; but this suggestion has been little followed.

Rape has become of late years a generally-cultivated field production, being valuable not only for the oil expressed from it, but also for feeding sheep on land not well adapted for growing turnips. It is cultivated on a variety of soils after paring and burning, and, when old, grass lands are brought into cultivation. The preparation and after-culture of the soil are the same as is required for the turnip, and on lands kept under plough it comes into rotation as a green crop.

The cultivation of this plant is extensively carried on in Flanders, chiefly for the sake of the oil obtained from the seed. After the oil is withdrawn, the husk is made into cakes, or sold as dust, and forms an important manure. Rape may be sown from the 24th of April to the 8th of June. If sown earlier it is apt to run to seed. From two to three pounds per acre is required, sown with the common turnip-drill; but, as rape-seed is much larger than turnip, the drill should be wider. When hoed, the rape should be set out at the same distance as turnip plants. The drills should be from twenty-six to twenty-eight or thirty inches, according to the quantity of manure given. As many ploughings, harrowings, and rollings should be given as may be necessary to make the soil as fine as possible. It is not so much the value of the green crop as the great certainty of a valuable crop of wheat that merits attention. The sheep are put on from the beginning to the middle of August; they must have the rape consumed by the middle or, at the latest, the end of September, so that the wheat may be sown before the autumnal rains take place.

Where mangel-wurzel is cultivated, the crop will be found to require hoeing and attention during the present month, as will also the crops of peas, beans, carrots, cabbage, &c. In former times the latter part of the month was employed in many parts of the country in

sowing a crop which has now gone almost out of cultivation: this consisted of the plant called buck-wheat, or brank. It has no natural affinity with wheat, and the seeds are never used in England as human food. The grains bear some resemblance in shape to the mast or nuts of the beech-tree, hence the plant is called, in Germany, beech-wheat. Buck-wheat is a handsome-looking annual plant, with branched, herbaceous stems, long arrow-shaped leaves, and purple flowers. It is a plant of rapid growth, and is said to ripen its seeds within one hundred days of the time it is sown. It will thrive on any soil, and yields a large increase. It is principally used as green food, all animals being fond of it, and thriving upon it. It is said greatly to improve the quality of the milk when cows are fed with it, and it has the advantage of bearing heat well, so that this crop continues green when all the grasses of the meadows are burnt up. One of the uses to which buck-wheat is applied is the feeding of pheasants in game-preserves during winter. Sometimes the grain is sown and left standing, that both food and cover may be afforded to the birds; at other times, the straw is taken unthreshed, and left in heaps where the birds resort. They are extremely fond of this food, seldom ramble when it is afforded them in plenty, and will often allure others to come and partake with them. When buck-wheat is used as food for horses or pigs, it is necessary previously to crush the grain. Bees are much attracted by the blossoms of this plant, and the honey thus obtained is said to be superior to every other both for flavour and transparency. In some parts of the United States buck-wheat is greatly esteemed, and much cultivated. When finely ground it is made into cakes, somewhat resembling our crumpets, which are eaten hot, throughout the winter season. The flour is made into a batter of moderate consistency, by the addition of water; it is then left to ferment a little, but not to become actually sour, after which it is poured upon the griddle, and, when sufficiently baked, is taken at once to the table, buttered, and eaten hot, with the addition of a little honey. In most of the settlers' houses, the dish of batter, and the griddle, may be seen standing in a corner of the fireplace from one week's end to another, as it is customary to have these cakes at every meal. Nor are they confined to the poorer classes, for the middle and higher orders are found to patronize them, and hotel and tavern keepers find them in constant request during the cold season.

The middle of this month is a season of busy occupation in hemp and flax-growing districts, though these products are now much less cultivated in England than they were at a former period of our history. The culture of hemp is considered of so much importance by our legislators that premiums have been offered to encourage it, not only in this country but in our colonial possessions; but these have not been effectual in greatly extending its growth, as it can be imported from Russia and other countries of the north of Europe, much below the price at which our farmers can produce it. The following is the substance of an account of its cultivation in Dorsetshire:—It is usually sown about the 15th of May, on the best arable land, on which about twenty cart-loads of good manure have been spread, say about a ton to the load; this is ploughed in, and the ground well ploughed two or three times, and well dragged and harrowed, to get the soil as fine as possible, and about two bushels or two bushels and a half of seed sown to the acre; that which produces no seed, called summer-hemp, or cinner-hemp, is drawn about five or six weeks after the plant comes up; it is at that time in blossom. When drawn, it is tied up in bundles and carried to some meadow land, and there spread to ripen; when ripe and dry it is bundled, and heckled. That which stands for seed has no flower that can be discerned; it is generally ripe early in September, when it is drawn, bundled up, and

stowed up in the field to dry and harden, when it is threshed out in the fields. Most commonly in Dorset the seed is sold upon the spot at from 2s. 6d. to 7s. the bushel: an acre of hemp produces eighteen or twenty bushels. In Somersetshire the produce in seed is sometimes thirty bushels per acre. When threshed, the hemp is carried to the meadows and spread to ripen as the other, and stacked in the same way to prepare it for sale. It is sent to the houses of the poor in the neighbourhood, to be scaled or stripped of its outside rind or bark, which is the valuable part, the remainder being allowed to the poor as fuel. Old men, women, and children are employed in the scaling, but there is often much waste from improper management, and the difficulty of getting this process properly attended to, has stood much in the way of the successful cultivation of hemp. An acre of hemp in a good season will produce fourteen, sixteen, or eighteen weights, of thirty-two pounds to the weight. This is in Dorsetshire; in Somersetshire they reckon their weight two pounds less.

#### CONTAGION IN AN INDIAN VILLAGE

THERE came unto my father's hut  
A man, weak creature of distress;  
The red-man's door is never shut  
Against the lone and shelterless;  
And when he knelt before his feet,  
My father let the stranger in;  
He gave him of his hunter's meat,—  
Alas! it was a deadly sin!

The stranger's voice was not like ours,  
His face at first was deadly pale;  
Anon 'twas like the yellow flowers,  
Which tremble in the meadow gale.  
And when he laid him down to die,  
And murmured of his father-land,  
My mother wiped his tearful eye,  
My father held his burning hand!

He died at last—the funeral yell  
Rang upward from his burial sod;  
And the old powwah\* knelt to tell  
The tidings of the white man's God.  
The next day came,—my father's brow  
Grew heavy with a fearful pain;  
He did not take his hunting-bow—  
He never saw the woods again!

He died, even as the white man died—  
My mother, she was smitten too—  
My sisters vanished from my side,  
Like diamonds from the sunlit dew.  
And then we heard the powwahs say,  
That God had sent his angel forth  
To sweep our ancient tribes away,  
And poison and unpeople earth.

And it was so—from day to day  
The spirit of the plague went on;  
And those at morning blithe and gay  
Were dying at the set of sun.  
They died: our free, bold hunters died—  
The living might not give them graves,  
Save, when along the water-side,  
They gave them to the hurrying waves.

The carrion-crow, the ravenous beast,  
Turned loathing from the ghastly dead;  
Well might they shun the funeral feast  
By that destroying angel spread!  
One after one the red men fell;  
Our gallant war tribe passed away;  
And I alone am left to tell  
The story of its swift decay!—WHITTIER.

\* Powwah,—or powaw, as it is written by Webster,—a priest.

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